Dionissios T. Hristopulos

School of Mineral Resources Engineering

Technical University of Crete
73100 Chania - GREECE
☎ *Office: 30-28210-37688*
FAX *(30-28210-37853)*
✉ *dionisi@mred.tuc.gr*
www.geostatistics.tuc.gr

Education

1987–1991 **PhD, Condensed Matter Physics**, *Princeton University*, Princeton, NJ.

1985–1987 **Master of Arts, Physics**, *Princeton University*, Princeton, NJ.

1979–1985 **Diploma in Electrical Engineering**, *National Technical University*, Athens.

PhD Dissertation

Title: *Aspects of the Hubbard Model in Relation to High Tc Superconductivity*

Dissertation Advisor: Philip W. Anderson, Ph.D. (Nobel Laureate) and Sriram Shastry

Summary: Development of computational models for Monte Carlo simulations of variational many-body probability density functions applied to cuprate high-temperature superconductors

Diploma Thesis

Title: *Optical Activity and the Electrooptic Effect in $B_{12}GeO_{20}$ Crystals*

Academic Advisors: Alexandros A. Serafetinidis, Ph.D. and Evangelos Anastasakis, Ph.D.

Summary: Theoretical analysis and experimental measurements of the electrooptic coefficient of semiconductor bismuth germanate (BGO) crystals used in optical fiber communications (in Greek)

Postdoctoral Training

5/1993–10/1995 **Research Associate**, *Department of Environmental Sciences and Engineering, University of North Carolina*, Chapel Hill, USA.

- Applications of geostatistical methods in environmental mapping.
- Computational investigations of flow and statistical upscaling methods in heterogeneous media.

Languages

English	Almost native	*I lived in the USA and Canada for 15 years*
French	Fluent	*Speaking and writing ability - Certificat Sorbonne Premier Degré*
German	Good	*Somewhat rusty - mainly reading ability - Mittelstuffe Diplom*
Greek	Native	*Mother tongue*
Spanish	Fair	*Survival skills*

Research and Academic Appointments

9/2007–Present **Professor**, *Department of Mineral Resources Engineering, Technical University of Crete*, Chania, Greece.

- Development of novel space-time covariance functions and spatiotemporal interpolation methods for environmental applications.
- Statistical analysis of human brain effective connectivity using EEG signals.
- Geostatistical analysis of water resources in sparsely gauged basins.
- Statistical analysis and dynamic modeling of earthquake recurrence times.
- Analysis of anisotropy in scattered spatial data (e.g., ground measurements of background radioactivity).
- Estimation and uncertainty analysis of coal reserves and coal quality attributes.

1/7/2013-15/8/2013 **Visiting Professor**, *Division of Applied Mathematics, Brown University*, Providence, RI, USA.

- Collaboration with CRUNCH group on uncertainty quantification and space-time data analysis

9/2002–9/2007 **Associate Professor**, *Department of Mineral Resources Engineering, Technical University of Crete*, Chania, Greece.

- Development of spatial interpolation and classification methods using geostatistics and statistical physics concepts.
- Statistical analysis of GPS signals for structural monitoring under wind loading.
- Modelling of mechanical and flow properties in porous materials, natural and artificial.

8/2000–8/2002 **Research Scientist**, *Pulp and Paper Research Institute of Canada*, Pointe Claire, Québec, Canada.

- Dynamic and statistical models for paper web dynamics and the fracture statistics of heterogeneous composite materials.
- Development of new physical models to explain tension variations in paper webs and statistical variations of the tensile strength of paper sheets.

11/1995–7/2000 **Research Assistant Professor**, *Department of Environmental Sciences and Engineering, University of North Carolina*, Chapel Hill, USA.

- Formulation of new geostatistical methods (theoretical and computational) and investigations of environmental fluid mechanics.
- Development of a renormalization group method for hydraulic conductivity coarse-graining and Monte Carlo algorithms for geostatistical simulations (FORTRAN, MATLAB codes).

Traineeships and Other Appointments

3/1991–12/1992 **Communications Engineer**, *Tanagra Air Force Base*, Greece, Mandatory military service.

In charge of computer organization of the training office at the Tanagra Combat Wing.

Summer 1986 **Research Assistant**, *Physics Department, Princeton University*, Princeton, NJ, USA.

Studied the structure and phase transitions of biolipids using X-ray imaging methods in the biophysics group of Prof. Sol Gruner.

1981 - 1985 **Scientific Translation**, *Science Magazine, "Periscope of the Sciences"*, Athens, Greece.

Translation of English, French and German popular science articles in Greek and article compilation based on several sources.

Summer 1984 **Summer Trainee**, *Deutscher Akademischer Austausch Dienst*, Jülich, Germany.

Maintenance of short-wave radio emitters at Deutsche Welle Broadcasting Station.

Publications

Summary: 202 publications, including 2 books, 76 papers in peer-reviewed international journals, 39 conference proceedings papers, 11 peer-reviewed technical reports, 80 international conference abstracts, one publication in an official publication of the European Communities, and one paper in a peer-reviewed national journal

Google Scholar: 1848 citations, h-index: 22, i10-index: 42 (retrieved on December 15, 2019)

Books

[1] G. Christakos and **D. T. Hristopulos**. *Spatiotemporal Environmental Health Modelling*. Springer US, New York, NY, 1st edition, 1998. ISBN: 978-0-7923-8211-9.

[2] **D. T. Hristopulos**. *Random Fields for Spatial Data Modeling: A Primer for Engineers and Physicists*. Advances in Geographic Information Science. Springer Nature B.V., Dordrecht, the Netherlands, 2020. Planned publication date: 18.01.2020. ISBN: 978-94-024-1916-0. doi:10.1007/978-94-024-1918-4.

Submitted Manuscripts

[3] **D. T. Hristopulos** and A. Baxevani. Effective probability distributions for spatially dependent processes. *Stochastic Environmental Research and Risk Assessment*, 2019.

[4] **D. T. Hristopulos**, A. Pavlides, V. D. Agou, and P. Gkafa. Stochastic local interaction model for geostatistical analysis of big spatial datasets. *Mathematical Geosciences*, 2019.

[5] S. D. Nerantzaki, **D. T. Hristopulos**, and N. P. Nikolaidis. Estimation of the uncertainty of hydrologic predictions in a karstic Mediterranean watershed. *Science of the Total Environment*, 2019.

In Preparation

[6] **D. T. Hristopulos**, A. Babul, S. Babul, and N. Virji-Babul. Brain connectivity patterns from resting-state EEG based on inter-channel information flow rate. *Human Brain Mapping*, 2018.

Journal Papers

[7] **D. T. Hristopulos** and V. D. Agou. Stochastic local interaction model for space-time data. *Spatial Statistics*, 2019. doi:10.1016/j.spasta.2019.100403.

[8] **D. T. Hristopulos**, A. Babul, L. Brucar, and N. Virji-Babul. Disrupted information flow in resting state in adolescents with sports related concussion. *Frontiers in Human Neuroscience*, 13:419, 2019. doi:10.3389/fnhum.2019.00419.

[9] M. Žukovič, M. Borovsky, M. Lach, and **D. T. Hristopulos**. GPU-accelerated simulation of massive spatial data based on the modified planar rotator model. *Mathematical Geosciences*, 52(1):123–143, 2019. doi:10.1007/s11004-019-09835-3.

[10] E. Varouchakis and **D. T. Hristopulos**. Comparison of spatiotemporal variogram functions based on a sparse dataset of groundwater level variations. *Spatial Statistics*, 34:100245, 2019. doi:https://doi.org/10.1016/j.spasta.2017.07.003.

[11] V. Agou, E. A. Varouchakis, and **D. T. Hristopulos**. Geostatistical analysis of precipitation on the island of Crete (Greece) based on a sparse monitoring network. *Environmental Monitoring and Assessment*, 191:353, 2019. doi:10.1007/s10661-019-7462-8.

[12] K. A. K. Deng, S. Lamine, A. Pavlides, G. P. Petropoulos, P. K. Srivastava, Y. Bao, **Hristopulos, D.**, and V. Anagnostopoulos. Operational soil moisture from ASCAT in support of water resources management. *Remote Sensing*, 11(5):579, 2019. doi:10.3390/rs11050579.

[13] M. Žukovič and **D. T. Hristopulos**. Gibbs Markov random fields with continuous values based on the modified planar rotator model. *Physical Review E*, 98(6):062135, 2018. doi:10.1103/PhysRevE.98.062135.

[14] G. P. Petropoulos, P. K. Srivastava, K. P. Ferentinos, and **D. Hristopoulos**. Evaluating the capabilities of optical/TIR imaging sensing systems for quantifying soil water content. *Geocarto International*, pages 1–18, 2018. doi:10.1080/10106049.2018.1520926.

[15] G. Kaniadakis and **D. T. Hristopulos**. Nonlinear kinetics on lattices based on the kinetic interaction principle. *Entropy*, 20(6):426, 2018. doi:10.3390/e20060426.

[16] **D. T. Hristopulos** and I. Tsantili. Space-time covariance functions based on linear response theory and the turning bands method. *Spatial Statistics*, 22(2):321–337, 2017. doi:10.1016/j.spasta.2017.07.001.

[17] E. A. Varouchakis, K. Spanoudaki, **D. T. Hristopulos**, G. P. Karatzas, and G. A. Corzo Perez. Stochastic modeling of aquifer level temporal fluctuations based on the conceptual basis of the soil-water balance equation. *Soil Science*, 181(6):224–231, 2016. doi:10.1097/SS.0000000000000157.

[18] M. P. Petrakis and **D. T. Hristopulos**. Non-parametric approximations for anisotropy estimation in two-dimensional differentiable Gaussian random fields. *Stochastic Environmental Research and Risk Assessment*, 31(7):1853–1870, 2017. doi:10.1007/s00477-016-1361-0.

[19] A. Muradova and **D. T. Hristopulos**. Numerical simulation of a coupled nonlinear model for grain coarsening and coalescence. *Simulation Modelling Practice and Theory*, 62:102–116, March 2016. doi:10.1016/j.simpat.2016.01.012.

[20] I. Tsantili and **D. T. Hristopulos**. Karhunen-Loève expansions of Spartan spatial random fields. *Probabilistic Engineering Mechanics*, 43:132–147, January 2016. doi:10.1016/j.probengmech.2015.12.002.

[21] **D. T. Hristopulos** and A. Muradova. Kinetic model of mass exchange with dynamic Arrhenius transition rates. *Physica A*, 444:95–109, February 2016. doi:10.1016/j.physa.2015.10.007.

[22] A. Pavlides, **D. T. Hristopulos**, C. Roumpos, and Z. Agioutantis. Spatial modelling of lignite energy reserves for exploitation planning and quality control. *Energy*, 93(Part 2):1906–1917, 2015. doi:10.1016/j.energy.2015.10.049.

[23] **D. T. Hristopulos** and I. Tsantili. Space-Time models based on random fields with local interactions. *International Journal of Modern Physics B*, 29:1541007, 2015. doi:10.1142/S0217979215410076.

[24] **D. T. Hristopulos**, M. P. Petrakis, and G. Kaniadakis. Weakest-link scaling and extreme events in finite-sized systems. *Entropy*, 17(3):1103–1122, 2015. doi:10.3390/e17031103.

[25] **D. T. Hristopulos**. Stochastic Local Interaction (SLI) model: Bridging Machine Learning and Geostatistics. *Computers and Geosciences*, 85(Part B):26–37, December 2015. doi:10.1016/j.cageo.2015.05.018.

[26] **D. T. Hristopulos**. Covariance functions motivated by spatial random field models with local interactions. *Stochastic Environmental Research and Risk Assessment*, 29(3):739—754, 2015. doi:10.1007/s00477-014-0933-0.

[27] **D. T. Hristopulos** and E. Porcu. Multivariate Spartan spatial random field models. *Probabilistic Engineering Mechanics*, 37:84–92, 2014. doi:10.1016/j.probengmech.2014.06.005.

[28] V. Mouslopoulou, D. Moraetis, L. Benedetti, V. Guillou, O. Bellier, and **D. Hristopulos**. Normal faulting in the forearc of the Hellenic subduction margin: Paleoearthquake history and kinematics of the Spili fault, Crete, Greece. *Journal of Structural Geology*, 66:298–308, 2014. doi:10.1016/j.jsg.2014.05.017.

[29] **D. T. Hristopulos**, M. Petrakis, and G. Kaniadakis. Finite-size effects on return interval distributions for weakest-link-scaling systems. *Physical Review E*, 89(5):052142, May 2014. doi:10.1103/PhysRevE.89.052142.

[30] M. Žukovič and **D. T. Hristopulos**. A Directional gradient-curvature method for gap filling of gridded environmental spatial data with potentially anisotropic correlations. *Atmospheric Environment*, 77:901–909, October 2013. doi:10.1016/j.atmosenv.2013.05.078.

[31] V. Mouslopoulou, **D. T. Hristopulos**, A. Nicol, J. J. Walsh, and S. Bannister. The importance of microearthquakes in crustal extension of an active rift. *Journal of Geophysical Research - Solid Earth*, 118(4):1556—1568, 2013. doi:10.1002/jgrb.50062.

[32] **D. T. Hristopulos** and V. Mouslopoulou. Strength statistics and the distribution of earthquake interevent times. *Physica A*, 392(3):485–496, 2013. doi:10.1016/j.physa.2012.09.011.

[33] E. A. Varouchakis and **D. T. Hristopulos**. Improvement of groundwater level prediction in sparsely gauged basins using physical laws and local geographic features as auxiliary variables. *Advances in Water Resources*, 52:34–49, February 2013. doi:10.1016/j.advwatres.2012.08.002.

[34] E. A. Varouchakis and **D. T. Hristopulos**. Comparison of stochastic and deterministic methods for mapping groundwater level spatial variability in sparsely monitored basins. *Environmental Monitoring and Assessment*, 185(1):1–19, 2013. doi:10.1007/s10661-012-2527-y.

[35] E. A. Varouchakis, **D. T. Hristopulos**, and G. Karatzas. Improving kriging of groundwater level data using non-linear normalizing transformations-a field application. *Hydrological Sciences Journal*, 57(7):1404–14019, 2012. doi:10.1080/02626667.2012.717174.

[36] M. Žukovič and **D. T. Hristopulos**. Reconstruction of missing data in remote sensing images using conditional stochastic optimization with global geometric constraints. *Stochastic Environmental Research and Risk Assessment*, 27(4):785–806, 2013. doi:10.1007/s00477-012-0618-5.

[37] V. Mouslopoulou, A. Nicol, J. J. Walsh, J. G. Begg, D. B. Townsend, and **D. T. Hristopulos**. Fault-slip accumulation in an active rift over thousands to millions of years and the importance of paleoearthquake sampling. *Journal of Structural Geology*, 36(2):71–80, March 2012. doi:10.1029/2010JB007804.

[38] V. Mouslopoulou and **D. T. Hristopulos**. Patterns of tectonic fault interactions captured through geostatistical analysis of microearthquakes. *Journal of Geophysical Research (Solid Earth)*, 116(B15):B07305, 2011. doi:10.1029/2010JB007804.

[39] I. Spiliopoulos, **D. T. Hristopulos**, M. P. Petrakis, and A. Chorti. A multigrid method for the estimation of geometric anisotropy in environmental data from sensor networks. *Computers and Geosciences*, 37(3):320–330, 2011. doi:10.1016/j.cageo.2010.06.007.

[40] G. Dubois, D. Cornford, **D. Hristopulos**, E. Pebesma, and J. Pilz. Introduction to this special issue on geoinformatics for environmental surveillance. *Computers and Geosciences*, 37(3):277–279, 2011. doi:10.1016/j.cageo.2010.06.002.

[41] E. Pebesma, D. Cornford, G. Dubois, G.B. M. Heuvelink, **D. Hristopoulos**, J. Pilz, J. Stöhlker, G. Morin, and J. O. Skøien. Intamap: The design and implementation of an interoperable automated interpolation web service. *Computers and Geosciences*, 37(3):343–352, 2011. doi:10.1016/j.cageo.2010.03.019.

[42] **D. T. Hristopulos** and M. Žukovič. Relationships between correlation lengths and integral scales for covariance models with more than two parameters. *Stochastic Environmental Research and Risk Assessment*, 25(2):11–19, 2011. doi:10.1016/j.cageo.2010.06.002.

[43] **D. T. Hristopulos** and S. N. Elogne. Computationally efficient spatial interpolators based on Spartan spatial random fields. *IEEE Transactions On Signal Processing*, 57(9):3475–3487, 2009. doi:10.1109/TSP.2009.2021450.

[44] M. Žukovič and **D. T. Hristopulos**. The method of normalized correlations: a fast parameter estimation method for random processes and isotropic random fields that focuses on short-range dependence. *Technometrics*, 51(2):173–185, 2009. doi:10.1198/TECH.2009.0018.

[45] M. Žukovič and **D. T. Hristopulos**. Multilevel discretized random field models with "spin" correlations for the simulation of environmental spatial data. *Journal of Statistical Mechanics - Theory and Experiment*, page Art. No. P02023, February 2009. doi:10.1088/1742-5468/2009/02/P02023.

[46] A. Moustakas and **D. T. Hristopulos**. Estimating tree abundance from remotely sensed imagery in semi-arid and arid environments: bringing small trees to the light. *Stochastic Environmental Research and Risk Assessment*, 23(1):111–118, 2009. doi:10.1007/s00477-007-0199-x.

[47] A. Chorti and **D. T. Hristopulos**. Nonparametric identification of anisotropic (elliptic) correlations in spatially distributed data sets. *IEEE Transactions on Signal Processing*, 56(10, Part 1):4738–4751, 2008. doi:10.1109/TSP.2008.924144.

[48] M. Žukovič and **D. T. Hristopulos**. Classification of missing values in spatial data using spin models. *Physical Review E*, 80(1, Part 1):Art. No. 011116, 2009. doi:10.1103/PhysRevE.80.011116.

[49] A. Žukovič and **D. T. Hristopulos**. Spartan random processes in time series modeling. *Physica A-Statistical Mechanics and its Applications*, 387(15):3995–4001, 2008. doi:10.1016/j.physa.2008.01.051.

[50] **D. T. Hristopulos** and M. Demertzi. A semi-analytical equation for the Young's modulus of isotropic ceramic materials. *Journal of The European Ceramic Society*, 28(6):1111–1120, 2008. doi:10.1016/j.jeurceramsoc.2007.10.004.

[51] M. Žukovič and **D. T. Hristopulos**. Environmental time series interpolation based on Spartan random processes. *Atmospheric Environment*, 42(33):7669–7678, 2008. doi:10.1016/j.atmosenv.2008.05.062.

[52] S. N. Elogne, **D. T. Hristopulos**, and E. Varouchakis. An application of Spartan spatial random fields in environmental mapping: focus on automatic mapping capabilities. *Stochastic Environmental Research and Risk Assessment*, 22(5):633–646, 2008. doi:10.1007/s00477-007-0167-5.

[53] **D. T. Hristopulos** and S. N. Elogne. Analytic properties and covariance functions for a new class of generalized Gibbs random fields. *IEEE Transactions on Information Theory*, 53(12):4667–4679, 2007. doi:10.1109/TIT.2007.909163.

[54] **D. T. Hristopulos**, S. P. Mertikas, I. Arhontakis, and J. M. W. Brownjohn. Using GPS for monitoring tall-building response to wind loading: filtering of abrupt changes and low-frequency noise, variography and spectral analysis of displacements. *GPS Solutions*, 11(2):85–95, 2007. doi:10.1007/s10291-006-0035-7.

[55] **D. T. Hristopulos**. Spatial random field models inspired from statistical physics with applications in the geosciences. *Physica A-Statistical Mechanics and its Applications*, 365(1):211–216, 2006. doi:10.1016/j.physa.2006.01.037.

[56] **D. T. Hristopulos**, L. Leonidakis, and A. Tsetsekou. A discrete nonlinear mass transfer equation with applications in solid-state sintering of ceramic materials. *European Physical Journal B*, 50(1-2):83–87, 2006. doi:10.1140/epjb/e2006-00034-0.

[57] **D. T. Hristopulos**. Approximate methods for explicit calculations of non-Gaussian moments. *Stochastic Environmental Research and Risk Assessment*, 20(4):278–290, 2006. doi:10.1007/s00477-005-0023-4.

[58] **D. T. Hristopulos**. Erratum: Spartan Gibbs random field models for geostatistical applications (vol 24, pg 2125, 2003). *SIAM Journal on Scientific Computing*, 26(6):2176, 2005. doi:10.1137/050624613.

[59] **D. T. Hristopulos**. Spartan Gaussian random fields for geostatistical applications: Non-constrained simulations on square lattices and irregular grids. *Journal of Computational Methods in Science and Engineering*, 5(2):149–164, 2005.

[60] A. Kolovos, G. Christakos, **D. T. Hristopulos**, and M. L. Serre. Methods for generating non-separable spatiotemporal covariance models with potential environmental applications. *Advances in Water Resources*, 27(8):815–830, 2004. doi:10.1016/j.advwatres.2004.04.002.

[61] **D. T. Hristopulos** and T. Uesaka. Structural disorder effects on the tensile strength distribution of heterogeneous brittle materials with emphasis on fiber networks. *Physical Review B*, 70(6):Art. No. 064108, 2004. doi:10.1103/PhysRevB.70.064108.

[62] **D. T. Hristopulos**. Renormalization group methods in subsurface hydrology: overview and applications in hydraulic conductivity upscaling. *Advances in Water Resources*, 26(12):1279–1308, 2003. doi:10.1016/S0309-1708(03)00103-9.

[63] **D. T. Hristopulos**. Permissibility of fractal exponents and models of band-limited two-point functions for fGn and fBm random fields. *Stochastic Environmental Research and Risk Assessment*, 17(3):191–216, 2003. doi:10.1007/s00477-003-0126-8.

[64] **D. T. Hristopulos**. Spartan Gibbs random field models for geostatistical applications. *SIAM Journal on Scientific Computing*, 24(6):2125–2162, 2003. doi:10.1137/S106482750240265X.

[65] **D. T. Hristopulos** and T. Uesaka. A model of machine-direction tension variations in paper webs with runnability applications. *Journal of Pulp and Paper Science*, 28(12):389–394, 2002.

[66] **D. T. Hristopulos**. New anisotropic covariance models and estimation of anisotropic parameters based on the covariance tensor identity. *Stochastic Environmental Research and Risk Assessment*, 16(1):43–62, 2002.

[67] **D. T. Hristopulos** and G. Christakos. Practical calculation of non-Gaussian multivariate moments in spatiotemporal Bayesian maximum entropy analysis. *Mathematical Geology*, 33(5):543–568, 2001.

[68] G. Christakos, **D. T. Hristopulos**, and P. Bogaert. On the physical geometry concept at the basis of space/time geostatistical hydrology. *Advances in Water Resources*, 23(8):799–810, 2000.

[69] G. Christakos, **D. T. Hristopulos**, and A. Kolovos. Stochastic flowpath analysis of multiphase flow in random porous media. *SIAM Journal on Applied Mathematics*, 60(5):1520–1542, 2000.

[70] **D. T. Hristopulos** and G. Christakos. Renormalization group analysis of permeability upscaling. *Stochastic Environmental Research and Risk Assessment*, 13(1-2):131–160, 1999.

[71] **D. T. Hristopulos**, G. Christakos, and M. Serre. Numerical implementation of a space-transformation approach for solving the three-dimensional flow equation. *SIAM Journal on Scientific Computing*, 20(2):619–647, 1998.

[72] **D. T. Hristopulos** and G. Christakos. An analysis of hydraulic conductivity upscaling. *Nonlinear Analysis-Theory Methods & Applications*, 30(8):4979–4984, 1997.

[73] G. Christakos, **D. T. Hristopulos**, and X. Y. Li. Multiphase flow in heterogeneous porous media from a stochastic differential geometry viewpoint. *Water Resources Research*, 34(1):93–102, 1998.

[74] G. Christakos and **D. T. Hristopulos**. Stochastic indicator analysis of contaminated sites. *Journal of Applied Probability*, 34(4):988–1008, 1997.

[75] **D. T. Hristopulos** and G. Christakos. Diagrammatic theory of effective hydraulic conductivity. *Stochastic Hydrology and Hydraulics*, 11(5):369–395, 1997.

[76] **D. T. Hristopulos** and G. Christakos. Variational calculation of the effective fluid permeability of heterogeneous media. *Physical Review E*, 55(6, Part B):7288–7298, 1997.

[77] G. Christakos and **D. T. Hristopulos**. Stochastic radon operators in porous media hydrodynamics. *Quarterly of Applied Mathematics*, 55(1):89–112, 1997.

[78] G Christakos and **D. T. Hristopulos**. Characterization of atmospheric pollution by means of stochastic indicator parameters. *Atmospheric Environment*, 30(22):3811–3823, 1996.

[79] G Christakos and **D. T. Hristopulos**. Stochastic indicators for waste site characterization. *Water Resources Research*, 32(8):2563–2578, 1996.

[80] G Christakos, **D. T. Hristopulos**, and C. T. Miller. Stochastic diagrammatic analysis of groundwater-flow in heterogeneous porous-media. *Water Resources Research*, 31(7):1687–1703, 1995.

[81] G. Christakos and **D. T. Hristopulos**. Stochastic space transforms in subsurface hydrology .2. generalized spectral decompositions and Plancherel representations. *Stochastic Hydrology and Hydraulics*, 8(2):117–138, 1994.

[82] P. W. Anderson, B. S. Shastry, and **D. Hristopulos**. Class of variational singlet wave-functions for the Hubbard-model away from half filling. *Physical Review B*, 40(13):8939–8944, 1989.

Peer-Reviewed Conference Proceedings Papers

[83] M. Žukovič and **D. T. Hristopulos**. Efficient and scalable approach to equilibrium conditional simulation of gibbs markov random fields. In *Proceedings, Mathematical Modeling and Computational Physics 2019*. European Physics Journal-Web of Conferences (EPJ-WoC), Stará Lesná, High Tatra Mountains, Slovakia, 2019.

[84] M. Žukovič and **D. T. Hristopulos**. Short-range correlations in modified planar rotator model. *Journal of Physics: Conference Series*, 633(1):012105, 2015. URL: http://stacks.iop.org/1742-6596/633/i=1/a=012105.

[85] A. Tripolitsiotis, A. Daskalakis, S. Mertikas, **D. Hristopulos**, Z. Agioutantis, and P. Partsinevelos. Detection of small-scale rockfall incidents using their seismic signature. In D. G. Hadjimitsis, K. Themistocleous, S. Michaelides, and G. Papadavid, editors, *Proceedings, Third International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2015)*, volume 9535, pages 953519–953519–9. Society of Photo-Optical Instrumentation Engineers (SPIE), Paphos, Cyprus, March 16 2015. doi:10.1117/12.2192591.

[86] A. Pavlides, M. Galetakis, **D. T. Hristopulos**, and Ch. Roumpos. Evaluation of Reserves Using Geostatistical Tools to Assist with Long-Term and Mid-Term Mine Planning. In *Proceedings of Fifth International Symposium on Mineral Resources and Mine Development*, pages 459–472. Institute of Mining Engineering at RWTH Aachen University, Aachen, Germany, 27-28 May 2015. URL: www.aims.rwth-aachen.de.

[87] A. D Muradova and **D. T. Hristopulos**. Numerical investigation of grain coarsening and coalescence model. *Journal of Physics: Conference Series*, 574(1):012160, 2015. URL: http://stacks.iop.org/1742-6596/574/i=1/a=012160.

[88] **D. T. Hristopulos**. Fracture mechanics and earthquake recurrence times. In *Proceedings of 10th HSTAM International Congress on Mechanics*, Platanias, Greece, May 2013. Hellenic Society for Theoretical and Applied Mechanics, Technical University of Crete Publishing House. Paper no. 212. URL: http://www.10hstam.tuc.gr/Program.html.

[89] D. Tsichritzis and **D. Hristopulos**. The triangle of knowledge applied in a remote region. In *Proceedings of 2nd International Conference: Supercomputer Technologies in Mathematical Modelling*, pages 238–246, Yakutsk, Russia, July 2013. M.K. Ammosov North-Eastern Federal University, Steklov Mathematical Institute Russian Academy of Sciences (RAS), Institute for System Programming RAS, Lobachevsky State University of Nizhni Novgorod, Beijing University of Aeronautics and Astronautics. URL: http://sctemm.s-vfu.ru/en2013/presentations/.

[90] A. Pavlides, **D. T. Hristopulos**, M. Galetakis, and Ch. Roumpos. Geostatistical analysis of the calorific value and energy content of the Mavropigi multi-seam lignite deposit in Northern Greece. In *Proceedings of Fourth International Symposium on Mineral Resources and Mine Development*, pages 317–324. Institute of Mining Engineering at RWTH Aachen University, Aachen, Germany, 22-23 May 2013. URL: www.aims.rwth-aachen.de.

[91] A. Pavlides, **D. T. Hristopulos**, Z. Agioutantis, and Ch. Roumpos. Evaluation of multilayer deposit layers using a profitability index. In *Proceedings of AIMS: Sustainable Development in the Minerals Industry - From Primary Production to*

Sustainable Supply Chains, RWTH Aachen University, pages 317–324. Institute of Mining Engineering at RWTH Aachen University, Aachen, Germany, 14-17 June 2011. URL: www.aims.rwth-aachen.de.

[92] **D. T. Hristopulos**. Spartan random fields and applications in spatial interpolation and conditional simulation. In *Proceedings of the 12th European Conference on the Mathematics of Oil Recovery, Oxford, UK*. European Association of Geoscientists and Engineers, September 2010. Paper B004. URL: http://www.earthdoc.org/detail.php?pubid=41284, doi:10.3997/2214-4609.20144965.

[93] **D. T. Hristopulos**. Extending minimum curvature estimators using Spartan spatial random fields. In *Proceedings of StatGIS 2009: Geoinformatics for Environmental Surveillance*. June 2009. URL: http://www.math.uni-klu.ac.at/stat/Tagungen/statgis/2009/.

[94] **D. T. Hristopulos**, M. P. Petrakis, G. Spiliopoulos, and A. Chorti. Non-parametric estimation of geometric anisotropy from environmental sensor network measurements. In *Proceedings of StatGIS 2009: Geoinformatics for Environmental Surveillance*. June 2009. URL: http://www.math.uni-klu.ac.at/stat/Tagungen/statgis/2009/.

[95] **D. T. Hristopulos**, V. Mouslopoulou, and S. Bannister. Fault interactions and patterns of short-term fault growth due to micro-earthquakes. In *Proceedings of StatGIS 2009: Geoinformatics for Environmental Surveillance*. June 2009. URL: http://www.math.uni-klu.ac.at/stat/Tagungen/statgis/2009/.

[96] M. Žukovič and **D. T. Hristopulos**. An algorithm for spatial data classification and automatic mapping based on "spin" correlations. In L. S. Louca, Y. Chrysanthou, Z. Oplatkova, and K. Al-Begain, editors, *Proceedings 22nd European Conference on Modeling and Simulation, Nicosia, Cyprus*, pages 306–312. June 2008. ISBN: 978-0-9553018-5-8. URL: http://www.scs-europe.net/conf/ecms2008/ecms2008%20CD/ecms2008%20pdf/meth-ECMS2008_0047.pdf.

[97] A. Pavlides, **D. T. Hristopulos**, Z. Agioutantis, K. Kavouridis, and Ch. Roumpos. Comparison of lignite reserves estimates in the multilayer deposit of the Amyndeo mine. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 2nd International Workshop on Geoenvironment and Geotechnics (GEOENV 2008), 8-9 September 2008*, pages 231–236. Heliotopos Conferences, Athens, 2008.

[98] A. Pavlides, **D. T. Hristopulos**, Z. Agioutantis, K. Kavouridis, and Ch. Roumpos. Geostatistical analysis of lignite calorific values from a multiseam deposit. In Z. Agioutantis, editor, *Proceedings, 3rd International Conference on Sustainable Development Indicators in the Minerals Industry (SDIMI 2007), 17-20 June 2007, Milos*, pages 137–144. Heliotopos Conferences, Athens, 2008.

[99] A. Moustakas, A. Chorti, and **D. T. Hristopulos**. Geostatistical analysis of tree size distributions in the southern kalahari, obtained from remotely sensed data. In C. M. U. Neale, M. Owe, and G. D'Urso, editors, *Proceedings of the SPIE Conference on Remote Sensing for Agriculture, Ecosystems, and Hydrology IX*, volume 6742. SPIE, 2007. doi:10.1117/12.737281.

[100] E. Ieronimidi, S. P. Mertikas, and **D. Hristopoulos**. Fusion of Quickbird satellite images for vegetation monitoring in previously mined reclaimed areas. In M. Ehlers and U. Michel, editors, *Proceedings of the SPIE Conference on Remote Sensing for*

Environmental Monitoring, GIS Applications, and Geology VI, Stockholm, Sweden, volume 6366. International Society for Optical Engineering, SPIE, 2006. doi:10.1117/12.683905.

[101] S. N. Elogne and **D. T. Hristopulos**. Geostatistical applications of Spartan spatial random fields. In A. Soares, M. J. Pereira, and R. Dimitrakopoulos, editors, *geoENV VI: Geostatistics for Environmental Applications 2006*, volume 15 of *Quantitative Geology and Geostatistics*, pages 477–488. Springer, Berlin, Germany, 2008. doi:10.1007/978-1-4020-6448-7_39.

[102] A. Muradova and **D. T. Hristopulos**. Mathematical modelling of formation and dissociation of gas hydrate in the sea floor sediment. In T. E. Simos and G. Maroulis, editors, *Proceedings of the International Conference of Computational Methods in Sciences and Engineering 2006*, volume 7A, pages 402–405. VSP International Science Publishers, The Netherlands, October 2006.

[103] A. Pavlidis, **D. T. Hristopulos**, and M. Galetakis. Prediction of long-term quality fluctuations in the South Field lignite mine of West Macedonia. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 2nd International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 163–168. Heliotopos Conferences, Athens, 2006.

[104] M. Varouchakis and **D. T. Hristopulos**. Mapping of soil contaminants using spatial Spartan random fields: A comparative study. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the International Workshop in Geoenvironment and Geotechnics, Milos, Greece: September 2005*, pages 235–240. Heliotopos Conferences, Athens, June 2005.

[105] **D. T. Hristopulos**. The geostatistical power average and coarse-graining of the hydraulic conductivity in heterogeneous porous media. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 601–607. Heliotopos Conferences, Athens, June 2004.

[106] **D. T. Hristopulos**. Anisotropic Spartan random field models for geostatistical analysis. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 127–132. Heliotopos Conferences, Athens, June 2004.

[107] M. Galetakis and **D. T. Hristopulos**. Prediction of long-term quality fluctuations in the South Field lignite mine of West Macedonia. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 133–138. Heliotopos Conferences, Athens, June 2004.

[108] A. Kolovos, G. Christakos, **D. T. Hristopulos**, and M. L. Serre. Spatiotemporal covariance functions from physical models. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 157–162. Heliotopos Conferences, Athens, June 2004.

[109] E. Varouchakis, **D. T. Hristopulos**, and I. Vardavas. Stochastic modeling of the groundwater level in the Messara valley of Crete. In Z. Agioutantis and K. Komnitsas,

editors, *Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 139–144. Heliotopos Conferences, Athens, June 2004.

[110] E. Ieronymidi, S. P. Mertikas, M. Zervakis, G. Petrakis, A. Kefalas, and **D. T. Hristopulos**. Multi-image fusion and combined classification in land reclamation after mining exploitation at the island of Milos, Aegean Sea, Greece. In Z. Agioutantis and K. Komnitsas, editors, *Proceedings of the 1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology*, pages 495–500. Heliotopos Conferences, Athens, June 2004.

[111] M. Varouchakis and **D. T. Hristopulos**. An application of spatial Spartan random fields in geostatistical mapping of environmental pollutants. In T. E. Simos and G. Maroulis, editors, *Proceedings of the International Conference of Computational Methods in Sciences and Engineering 2004*, volume I, pages 741–744. VSP International Science Publishers, The Netherlands, 2004.

[112] **D. T. Hristopulos**. Effects of uncorrelated noise on the identification of spatial Spartan random field parameters. In T. E. Simos and G. Maroulis, editors, *Proceedings of the International Conference of Computational Methods in Sciences and Engineering 2004*, volume I, pages 737–740. VSP International Science Publishers, The Netherlands, June 2004.

[113] **D. T. Hristopulos**. Preface of the Symposium: Stochastic Methods and Applications. In T. E. Simos and G. Maroulis, editors, *Proceedings of the International Conference of Computational Methods in Sciences and Engineering 2004*, volume I, pages 734–736. VSP International Science Publishers, The Netherlands, 2004.

[114] **D. T. Hristopulos**. Effects of physical heterogeneity on two-dimensional anisotropic materials under tension. In A. Kounadis, C. Providakis, and G. Exadaktylos, editors, *Proceedings of the 7th National Congress on Mechanics, Chania, Greece*, volume II, pages 164–169. Hellenic Society for Theoretical and Applied Mechanics, Athens, June 2004.

[115] S. Mertikas, E. Ieronymidi, and **D. Hristopulos**. A proposal for the development of an integrated monitoring system for hazards control in the mining industry using remote sensing and related technologies. In Z. Agioutantis, editor, *Proceedings of International Conference on Sustainable Development Indicators in the Mineral Industries*, pages 341–346. Heliotopos Conferences, Athens, September 2003.

[116] **D. T. Hristopulos**. Simulations of Spartan random fields. In T. E. Simos, editor, *Proceedings of the International Conference of Computational Methods in Sciences and Engineering*, pages 242–247. World Scientific, London, England, September 2003.

[117] **D. T. Hristopulos**. Computationally efficient Spartan geostatistical models. In J. Pilz, editor, *Interfacing Geostatistics and GIS (Proceedings of the StatGIS 2003 International Conference, Poertschach, Austria: September 2003)*, pages 17–28. Springer, Heidelberg, 2008.

[118] **D. T. Hristopulos** and T. Uesaka. Factors that control the tensile strength distribution in paper. In *Proceedings of the International Paper Physics Conference, Victoria, BC, Canada: September 2003*, pages 5–17, Montreal, Canada, 2003. Pulp and Paper Technical Association of Canada.

[119] **D. T. Hristopulos** and T. Uesaka. Model of machine-direction web dynamics and impact on web break rates. In D. S. Keller and B. V. Ramarao, editors, *Proceedings of the 2002 Progress in Paper Physics Seminar, Syracuse, NY, USA: September 2002*, volume II, pages 206–210. 2002.

[120] T. Uesaka, M. Ferahi, **D. Hristopulos**, N. Deng, and C. Moss. Factors controlling pressroom runnability of paper. In C. F. Baker, editor, *Science of Papermaking: Transactions of the 12th Fundamental Research Symposium, Oxford, UK: September 2001*, volume II, pages 1423–1440. Pulp and Paper Fundamental Research Society, Lancashire, England, 2001.

[121] G. Christakos, **D. T. Hristopulos**, and M. L. Serre. BME studies of differential equations representing physical laws: Part I. In S. J. Lippard, A. Naess, and R. Sinding-Larsen, editors, *Proceedings of the Fifth Annual Conference of the International Association for Mathematical Geology*, volume I, pages 63–68. Tapir, Trondheim, Norway, 1999.

Peer-Reviewed Technical Reports

[122] **D. T. Hristopulos** and T. Uesaka. Factors that control tensile strength distribution of paper. Pulp and Paper Report 1643, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, 2003. 49 pages.

[123] **D. T. Hristopulos** and T. Uesaka. Web dynamics modelling, part I: Analysis of *md* (machine direction) tension variations for constant and fluctuating web speeds. Pulp and Paper Report 1560, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, 2001. 42 pages.

[124] **D. T. Hristopulos** and T. Uesaka. Web dynamics modelling, part I: Analysis of md tension variations for constant and fluctuating web speeds. Pulp and Paper Report 1560, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, 2001. 42 pages.

[125] **D. T. Hristopulos**. Variogram analysis of pulp and paper strength properties. P3 update, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, May-June 2001. 5 pages.

[126] **D. T. Hristopulos**. Web dynamics model. P3 update, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, March-April 2001. 2 pages.

[127] **D. T. Hristopulos**. Stochastic geometry and paper modeling. PBQ update, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, November 2000. 3 pages.

[128] **D. T. Hristopulos**. Error analysis of mechanical draw measurements. PBQ update, Pulp and Paper Research Institute of Canada, Pointe-Claire, Québec, November 2000. 4 pages.

[129] **D. T. Hristopulos** and G. Christakos. Renormalization and Upscaling Analysis: From a Grain of Sand to Complex Heterogeneities. *Center for the Advanced Study of the Environment News - University of North Carolina at Chapel Hill*, 1(1):1–8, 2001.

[130] **D. T. Hristopulos** and G. Christakos. Stochastic Models and the Scale-Up Problem in Heterogeneous Porous Media. *Center for Multiphase Research News - University of North Carolina at Chapel Hill*, 3(1):1–8, 1997.

[131] **D. T. Hristopulos**, G. Christakos, and C. T. Miller. Stochastic Modeling of Heterogeneity in Groundwater Flow and Transport Systems. *Center for Multiphase Research News - University of North Carolina at Chapel Hill*, 1(2):1–4, 1994.

[132] L. D. Oliver, G. Christakos, and **D. T. Hristopulos**. Implementation of a Space Transformation Approach for Solving the Three-dimensional Flow Equation. *Center for Multiphase Research News - University of North Carolina at Chapel Hill*, 1(2):9–13, 1994.

Conference Abstracts

[133] A. Baxevani and **D. T. Hristopulos**. Effective probability distributions for spatially dependent processes. In A. M. Mineo and L. Augugliaro, editors, *Program and Book of Abstracts of the 32th Edition of the European Meeting of Statisticians*, pages 63–64, Palermo, Italy, July 22–26 2019. Bernoulli Society for Mathematical Statistics and Probability. URL: http://www.ems2019.palermo.it.

[134] A. Baxevani and **D. T. Hristopulos**. Effective probability distributions for spatially dependent processes. In *Computationally-intensive methods for the robust analysis of non-standard data (CRoNoS) meeting and 2nd workshop and training school on Multivariate Data Analysis and Software*, Limassol, Cyprus, April 14–16 2019. Abstract no. C0264. URL: http://cmstatistics.org/CRONOSMDA2019/.

[135] **D. T. Hristopulos**. Spatiotemporal Models Inspired from Statistical Physics. In *Workshop on Modèles Spatio-temporels en Météorologie et Océanographie*, INRIA Rennes, France, November 27–30 2018. URL: https://spatiotempmeteo.sciencesconf.org/program.

[136] **D. T. Hristopulos**, A. Pavlidis, V. Agou, and P. Gkafa. Introduction to a stochastic local interaction model and its applications. In *Nineteenth Annual Conference of the International Association for Mathematical Geosciences*, Olomouc, Czech Republic, September 2–8 2018. URL: http://www.iamg2018.org/.

[137] A. Baxevani and **D. T. Hristopulos**. Effective probability distributions for spatially dependent processes. In *Nineteenth Annual Conference of the International Association for Mathematical Geosciences*, Olomouc, Czech Republic, September 2–8 2018. URL: http://www.iamg2018.org/.

[138] **D. T. Hristopulos**, A. Babul, and N. Virji-Babul. Evidence of disrupted directed connectivity in adolescents with sports related concussion. In *Poster listings of the 24th Annual Meeting of the Organization for Human Brain Mapping*, page 38, Singapore, June 17–21 2018. URL: https://www.humanbrainmapping.org/i4a/pages/index.cfm?pageid=3876.

[139] **D. Hristopulos** and V. Agou. Stochastic local interaction model for spatial and space-time data. In *Proceedings of METMA IX, Ninth Workshop on Spatiotemporal Modelling*, pages 53–56. Montpellier, France, June 13-15 2018. URL: http://metma2018.sfds.asso.fr/.

[140] **D. T. Hristopulos** and I. Tsantili. A connection between the damped harmonic oscillator in a heat bath and spatial data modeling. In *SigmaPhi 2017 International Conference in Statistical Physics*, Corfu, Greece, July 2017. URL: http://www.sigmaphi.polito.it.

[141] **D. T. Hristopulos** and A. Muradova. Study of nonlinear kinetic equation for grain growth. In *SigmaPhi 2017 International Conference in Statistical Physics*, Corfu, Greece, July 2017. URL: http://www.sigmaphi.polito.it.

[142] **D. T. Hristopulos**. Stochastic local interaction models: A review and new developments. In *Spatial Statistics: One World: One Health*, Lancaster, UK, July 2017.

Spatial Statistics Society. Accessed July 2, 2017. URL: https://www.elsevier.com/events/conferences/spatial-statistics-one-world-one-health/programme.

[143] **D. T. Hristopulos** and A. Baxevani. Effective probability distributions for spatially dependent processes. In *Spatial Statistics: One World: One Health*, Lancaster, UK, July 2017. Spatial Statistics Society. Accessed July 2, 2017. URL: https://www.elsevier.com/events/conferences/spatial-statistics-one-world-one-health/programme.

[144] **D. T. Hristopulos** and I. Tsantili. Construction of space-time covariance functions based on the solution of a Langevin equation and space transforms. In *UNCECOMP 2017, 2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering*, Rhodes, Greece, June 2017. European Community on Computational Methods in Applied Sciences (ECCOMAS).

[145] **D. T. Hristopulos**. A probability distribution function for finite-size systems with renormalized weakest-link behavior. In *Second International Conference on Statistical Distributions and Applications*, Niagara Falls, Ontario, Canada, October 2016. Central Michigan University. URL: http://people.cst.cmich.edu/lee1c/icosda2016/Abstracts.htm.

[146] A. Pavlides, **D. T. Hristopulos**, and R. Olea. Estimation of coal reserves: Comparison of the stochastic local interaction model and ordinary kriging with an application to a coal deposit in Wyoming, USA. In *35th International Geological Congress*, Cape Town, South Africa, September 2016. Paper 1796, Accessed January 11, 2017. URL: http://www.americangeosciences.org/information/igc.

[147] **D. T. Hristopulos** and I. Tsantili. Space-time covariance functions based on linear response theory and space transforms. In *8th International Workshop on Spatio-Temporal Modelling METMA VIII*, Valencia, Spain, June 2016. URL: http://congresos.adeituv.es/metma8/paginas/pagina_339_8.en.html.

[148] **D. T. Hristopulos**. Extreme value distributions with heavy tails for finite-size systems. In *ECCOMAS 2016, 7th European Congress on Computational Methods in Applied Sciences and Engineering*, Hersonisos, Heraklion, Greece, June 2016. European Community on Computational Methods in Applied Sciences (ECCOMAS).

[149] E. Varouchakis and **D. T. Hristopulos**. Dynamic modelling of aquifer level using space-time kriging and sequential Gaussian simulation. In *Geophysical Research Abstracts*, volume 18, Vienna, Austria, April 2016. European Geosciences Union. Abstract no. EGU2016-11694.

[150] **D. T. Hristopulos**. Geostatistics with Spartan Spatial Random Fields and Stochastic Local Interaction Models. In *Seventeenth Annual Conference of the International Association for Mathematical Geosciences*, Freiberg, Germany, September 2015. URL: http://www.iamg2015.de/programme.php.

[151] **D. T. Hristopulos**. Stochastic local interaction models. In *Spatial Statistics: Emerging Patterns*, Avignon, France, June 2015. Spatial Statistics Society. Accessed July 22, 2015. URL: http://www.spatialstatisticsconference.com/.

[152] **D. T. Hristopulos**. Stochastic local interaction models for spatial data modelling. In *UNCECOMP 2015, 1st International Conference on Uncertainty Quantification in*

Computational Sciences and Engineering, Hersonisos, Heraklion, Greece, May 2015. European Community on Computational Methods in Applied Sciences (ECCOMAS).

[153] I. Tsantili and **D. T. Hristopulos**. Spatiotemporal models based on concepts of statistical mechanics. In *UNCECOMP 2015, 1st International Conference on Uncertainty Quantification in Computational Sciences and Engineering*, Hersonisos, Heraklion, Greece, May 2015. European Community on Computational Methods in Applied Sciences (ECCOMAS).

[154] E. Varouchakis and **D. T. Hristopulos**. Assessment of groundwater level estimation uncertainty using sequential Gaussian simulation and Bayesian bootstrapping. In *Geophysical Research Abstracts*, volume 17, Vienna, Austria, April 2015. European Geosciences Union. Abstract no. EGU2015-13605.

[155] **D. T. Hristopulos**. Local geostatistical models and big data in hydrological and ecological applications. In *Geophysical Research Abstracts*, volume 17, Vienna, Austria, April 2015. European Geosciences Union. Abstract no. EGU2015-2179.

[156] V. Agou, E. Varouchakis, and **D. T. Hristopulos**. Geostatistical study of precipitation on the island of crete. In *Geophysical Research Abstracts*, volume 17, Vienna, Austria, April 2015. European Geosciences Union. Abstract no. EGU2015-470.

[157] **D. T. Hristopulos**, M. Petrakis, and G. Kaniadakis. The kappa-weibull distribution and weakest-link scaling. In *SigmaPhi2014 International Conference in Statistical Physics*, page 65, Rhodes, Greece, July 2014. URL: http://www.sigmaphi.polito.it.

[158] **D. T. Hristopulos**. Stochastic local interaction model for scattered spatial data. In *SigmaPhi2014 International Conference in Statistical Physics*, page 66, Rhodes, Greece, July 2014. URL: http://www.sigmaphi.polito.it.

[159] I. Tsantili and **D. T. Hristopulos**. Karhunen-Loéve expansion of Spartan spatial random fields. In *SigmaPhi2014 International Conference in Statistical Physics*, page 163, Rhodes, Greece, July 2014. URL: http://www.sigmaphi.polito.it.

[160] M. P. Petrakis and **D. T. Hristopulos**. Non-stationary covariance functions based on local interaction models. In *SigmaPhi2014 International Conference in Statistical Physics*, page 129, Rhodes, Greece, July 2014. URL: http://www.sigmaphi.polito.it.

[161] E. A. Varouchakis, **D. T. Hristopulos**, and G. P. Karatzas. Bayesian approach for estimating the space-time variability of groundwater level in a sparsely monitored basin on a Mediterranean island. In *Tenth Conference on Geostatistics and Environmental Applications*, page 10, Paris, France, July 2014. URL: http://www.geoenv2014.org/wp-uploads/geoENV-final-program.pdf.

[162] E. Varouchakis and **D. T. Hristopulos**. Space-time modelling of groundwater level using Spartan covariance function. In *Geophysical Research Abstracts*, volume 16, Vienna, Austria, April 2014. European Geosciences Union. Abstract no. EGU2014-4878.

[163] **D. T. Hristopulos**. Covariance models for hydrological applications. In *Geophysical Research Abstracts*, volume 16, Vienna, Austria, April 2014. European Geosciences Union. Abstract no. EGU2014-5322.

[164] E. Varouchakis and **D. T. Hristopulos**. A Monte Carlo approach for improved estimation of groundwater level spatial variability in poorly gauged basins. In *Geophysical Research Abstracts*, volume 15, Vienna, Austria, April 2013. European Geosciences Union. Abstract no. EGU2013-4022.

[165] **D. T. Hristopulos**. On the distribution of earthquake interevent times and the impact of spatial scale. In *Geophysical Research Abstracts*, volume 15, Vienna, Austria, April 2013. European Geosciences Union. Abstract no. EGU2013-7281.

[166] Vasiliki Mouslopoulou, **D. T. Hristopulos**, Andrew Nicol, John Walsh, and Stephen Bannister. The importance of microearthquakes in crustal extension of an active rift: a case study from New Zealand. In *Geophysical Research Abstracts*, volume 15, Vienna, Austria, April 2011. European Geosciences Union. Abstract no. EGU2013-5230.

[167] **D. T. Hristopulos**. Covariance Models Based on Local Interaction (Spartan) Functionals. In *2013 SIAM Conference on Computational Science & Engineering*, volume 15, page 29, Boston, USA, February 2013. Society of Industrial and Applied Mathematics. Session MS46 Data Enabled Multiscale, Multiphysics, and Multifidelity Stochastic Simulations – III of VII (Geophysical Systems).

[168] **D. T. Hristopulos**. Statistical models of spatial processes based on local-interaction energy functionals. In *Uncertainty Quantification Workshop*, Institute for Computational and Experimental Research in Mathematics, Brown University, Providence, RI, USA, October 2012. URL: http://icerm.brown.edu/sp-f12-w2.

[169] **D. T. Hristopulos**. On the distribution of earthquake recurrence intervals. In *International Conference on Computational & Experimental Engineering and Sciences*, Chania, Greece, May 2012. URL: http://www.icces.org/.

[170] **D. T. Hristopulos**. Brittle fracture in porous media: ceramics, paper, and earthquakes. In *4th International Conference on Porous Media, Interpore 2012*, Purdue University, Indiana, USA, May 2012. URL: http://www.physics.purdue.edu/interpore2012/index.php?page=program.

[171] **D. T. Hristopulos**. From statistical field theory to geostatistical analysis. In *4th International Conference on Porous Media, Interpore 2012*, Purdue University, Indiana, USA, May 2012. URL: http://www.physics.purdue.edu/interpore2012/index.php?page=program.

[172] M. Petrakis and **D. T. Hristopulos**. Statistics of burst avalanches in fiber bundle models and connections with earthquake dynamics. In *4th International Conference on Porous Media, Interpore 2012*, Purdue University, Indiana, USA, May 2012. URL: http://www.physics.purdue.edu/interpore2012/index.php?page=program.

[173] V. Mouslopoulou, A. Nicol, J. J. Walsh, and **D. T. Hristopulos**. Sampling biases in the paleoseismological data. In *2nd INQUA-IGCP-567 International Workshop on Active Tectonics, Earthquake Geology, Archaeology and Engineering*, Corinth, Greece, September 2011.

[174] **D. T. Hristopulos**. Langevin equations, random fields and applications to inverse problems in spatially distributed processes. In *SigmaPhi2011 International Conference in Statistical Physics*, page 68, Larnaca, Cyprus, July 2011. URL: http://www.sigmaphi2011.org/abstracts.aspx.

[175] **D. T. Hristopulos** and V. Mouslopoulou. On the use of the Weibull distribution as a model for the distribution of earthquake interevent times. In *SigmaPhi2011 International Conference in Statistical Physics*, page 68, Larnaca, Cyprus, July 2011. URL: http://www.sigmaphi2011.org/abstracts.aspx.

[176] M. Petrakis and **D. T. Hristopulos**. Investigation of avalanche recurrence interval statistics in fiber bundle models and connections with earthquake recurrence time. In *SigmaPhi2011 International Conference in Statistical Physics*, page 127, Larnaca, Cyprus, July 2011. URL: http://www.sigmaphi2011.org/abstracts.aspx.

[177] V. Mouslopoulou, A. Nicol, J. Walsh, D. Townsend, J. Begg, D. Heron, Beetham, and **D. T. Hristopulos**. Relations between paleoearthquakes and million-year fault growth in an active rift. In *Submarine Paleoseismology: The Offshore Search for Large Holocene Earthquakes, European Science Foundation*, Obergurgl, Austria, September 2010. URL: www.esf.org/conferences/10313.

[178] E. Varouchakis and **D. T. Hristopulos**. Stochastic space-time modelling of groundwater level variations in a mediterranean basin. In *Geophysical Research Abstracts*, volume 13, Vienna, Austria, May 2011. European Geosciences Union. Abstract no. EGU2011-4719.

[179] **D. T. Hristopulos**. Spartan random fields and applications in the analysis of gappy spatial data. In *28th European Meeting of Statisticians*, University of Piraeus, Greece, August 2010. URL: http://stat.unipi.gr/ems2010/.

[180] V. Mouslopoulou and **D. T. Hristopulos**. Patterns of fault interactions triggered by micro earthquake activity. In *Geophysical Research Abstracts*, volume 12, Vienna, Austria, May 2010. European Geosciences Union. Abstract no. EGU2010-3035.

[181] **D. T. Hristopulos**. Statistical downscaling based on Spartan spatial random fields. In *Geophysical Research Abstracts*, volume 12, Vienna, Austria, May 2010. European Geosciences Union. Abstract no. EGU2010-4176.

[182] E. Varouchakis, **D. T. Hristopulos**, and G. Karatzas. A study of the groundwater level spatial variability in the Messara valley of Crete. In *Geophysical Research Abstracts*, volume 11, Vienna, Austria, May 2009. European Geosciences Union. Abstract no. EGU2009-9351-1.

[183] **D. T. Hristopulos**. Extending minimum curvature estimators using Spartan spatial random fields. In *SigmaPhi2008 International Conference in Statistical Physics*, Kolymbari, Chania, August 2008. URL: http://areeweb.polito.it/eventi/sigmaphi2008/.

[184] M. Žukovič and **D. T. Hristopulos**. Simulations of environmental spatial data using Ising and Potts models. In *SigmaPhi2008 International Conference in Statistical Physics*, Kolymbari, Chania, August 2008. URL: http://areeweb.polito.it/eventi/sigmaphi2008/.

[185] S. Elogne and **D. T. Hristopulos**. Fast spatial interpolation using Spartan random fields with environmental health applications. In *Geophysical Research Abstracts*, volume 10, Vienna, Austria, May 2008. European Geosciences Union. Abstract no. EGU2008-A-02504.

[186] **D. T. Hristopulos**, A. Chorti, G. Spiliopoulos, and E. Petrakis. Systematic detection of anisotropy in spatial data obtained from environmental monitoring networks. In *Geophysical Research Abstracts*, volume 10, Vienna, Austria, May 2008. European Geosciences Union. Abstract no. EGU2008-A-03671.

[187] M. Žukovič and **D. T. Hristopulos**. A non-parametric approach for the conditional simulation of large environmental data sets based on statistical physics models and an application to the Walker lake data. In *Geophysical Research Abstracts*, volume 10, Vienna, Austria, May 2008. European Geosciences Union. Abstract no. EGU2008-A-03865.

[188] E. Varouchakis and **D. T. Hristopulos**. Geostatistical study of groundwater level spatial variability in the Messara valley of Crete. In *Geophysical Research Abstracts*, volume 11, Vienna, Austria, May 2009. European Geosciences Union. Abstract no. EGU2008-A-00281.

[189] E. Varouchakis, S. Elogne, and **D. T. Hristopulos**. Geostatistical applications of Spartan spatial random fields in environmental mapping. In *Geophysical Research Abstracts*, volume 8, Vienna, Austria, 2006. European Geosciences Union. Abstract no. 00674.

[190] S. Elogne and **D. T. Hristopulos**. Kernel methods for estimating the anisotropic parameters by using the covariance tensor identity. In *Geophysical Research Abstracts*, volume 8, Vienna, Austria, April 2006. European Geosciences Union. Abstract no. 02170.

[191] **D. T. Hristopulos**. Applications of the renormalization group method in upscaling hydrological parameters. In *Geophysical Research Abstracts*, volume 7, Vienna, Austria, 2005. European Geosciences Union General Assembly. Abstract no. 01809.

[192] **D. T. Hristopulos**. Spartan spatial random field models inspired from statistical physics with applications in the geosciences. In *Abstracts of the Next III Conference*, Kolymbari, Chania, August 2004. URL: http://www2.polito.it/eventi/next-sigmaphi/html/listpre.html.

[193] L. Leonidakis and **D. T. Hristopulos**. A nonlinear master equation with applications in grain growth processes. In *Abstracts of the Next III Conference*, Kolymbari, Chania, August 2004. URL: http://www2.polito.it/eventi/next-sigmaphi/html/listpre.html.

[194] A. Kolovos, G. Christakos, **D. T. Hristopulos**, and M. L. Serre. Visual representations of non-separable spatiotemporal covariance models. In *EOS Transactions of the American Geophysical Union 2003 Fall Meeting Supplement*, volume 84(46), San Francisco, December 2003.

[195] **D. T. Hristopulos**. A model of longitudinal tension variations in paper webs and implications for web breaks. In *Bulletin of the American Physical Society*, volume 47(2), page 943, Indianapolis, Indiana, March 2002. American Physical Society.

[196] **D. T. Hristopulos**. Calculation of effective fluid permeability in porous media with quenched random disorder using the coherent potential approximation. In *Bulletin of the American Physical Society*, volume 46(1), page 779, Seattle, Washington, March 2001. American Physical Society.

[197] **D. T. Hristopulos** and G. Christakos. Monte carlo calculations of single-phase effective permeability in 2-d anisotropic porous media. In *Bulletin of the American Physical Society*, volume 44(6), page 23, Chapel Hill, North Carolina, November 1999. Southeastern American Physical Society.

[198] **D. T. Hristopulos** and G. Christakos. A renormalization group calculation of the effective fluid permeability of heterogeneous porous media. In *Bulletin of the American Physical Society*, volume 44(1), page 1811, Los Angeles, California, March 1999. American Physical Society.

[199] **D. T. Hristopulos** and G. Christakos. Variational calculation of effective parameters in random porous media. In *Bulletin of the American Physical Society*, volume 43(1), page 339, Los Angeles, California, March 1998. American Physical Society.

[200] M. L. Serre, G. Christakos, and **D. T. Hristopulos**. Using the space transform method in geosciences. In *Fourth SIAM Conference on Mathematical and Computational Issues in the Geosciences*, Albuquerque, New Mexico, June 1997.

[201] **D. T. Hristopulos** and G. Christakos. Nonlocal kernels and upscaling of effective parameters. In *EOS Transactions of the American Geophysical Union 1996 Fall Meeting Supplement*, volume 77(46), page F277, San Francisco, December 1996.

[202] G. Christakos and **D. T. Hristopulos**. Stochastic path analysis of multiphase flow systems. In *EOS Transactions of the American Geophysical Union 1996 Fall Meeting Supplement*, volume 77(46), page F243, San Francisco, December 1996.

[203] G. Christakos and **D. T. Hristopulos**. Stochastic characterization of contaminated sites. In *EOS Transactions of the American Geophysical Union 1995 Spring Meeting Supplement*, volume 76(17), page S138, Baltimore, May 1995.

[204] **D. T. Hristopulos** and G. Christakos. Modeling of nonlocality and nonhomogeneity in the hydraulic conductivity. In *EOS Transactions of the American Geophysical Union 1995 Spring Meeting Supplement*, volume 76(17), page S138, Baltimore, May 1995.

[205] G. Christakos, **D. T. Hristopulos**, L. D. Oliver, and C. T. Miller. Stochastic analysis of flow in saturated porous media systems. In *EOS Transactions of the American Geophysical Union 1993 Fall Meeting Supplement*, volume 74(43), page S250, San Francisco, December 1993.

Other Peer Reviewed Publications

[206] **D. T. Hristopulos**. Identification of spatial anisotropy by means of the govariance tensor identity. In G. Dubois, editor, *EUR 21595 EN - Automatic Mapping Algorithms for Routine and Emergency Monitoring Data*, pages 103–124. Office for Official Publications of the European Communities, Luxembourg, 2006. ISBN 92-894-9400-X.

[207] **D. T. Hristopulos**. Uncertainty, Scale Dependence and Variability in Stochastic Models for Environmental Risk Assessment. *Technical Chronicles, Scientific Journal of the Technical Chamber of Greece*, V(1-2):7–15, 2002.

[208] E. Pebesma, J. O. Skoien, O. Baume, A. Chorti, **D. T. Hristopulos**, H. Kazianka, S. J. Melles, and G. Spiliopoulos. *intamap: Procedures for Automated Interpolation*, 2016. R package version 1.4-1. URL: http://CRAN.R-project.org/package=intamap.

Research Recognition and Awards

2019-Present **Member of the Associate Editor Board**, *Computers & Geosciences*, Published by Elsevier, 2017 Impact factor: 2.567.

2013-Present **Reviewer Editorial Board**, *Frontiers in Environmental Informatics, section of Frontiers in Environmental Science*, published by Frontiers.

1998-Present **Member of the Advisory Board**, *Stochastic Environmental Research and Risk Assessment*, Published by Springer, 2017 ISI Impact factor: 2.668.

2018 **Invited Presentation**, *Title: "Spatiotemporal Models Inspired from Statistical Physics", Workshop on Modèles spatio-temporels en météorologie et océanographie*, INRIA, Rennes, France, 27.11.18–30.11.18.

2016 **Invited Presentation**, *Title: "Stochastic Local Interaction Models and Space-Time Covariance Functions based on Linear Response Theory", Workshop on Stochastic models for climate-related risk*, Lebesgue Center of Mathematics, University of Bretagne Sud, France.

2010 **Recognition of Research Project Achievement**, *European Communities*.
The Marie Curie project SPATSTAT (2005-2008) that I coordinated was selected as *Marie Curie success story* highlighted in "Marie Curie Actions: Inspiring Researchers," EC, Luxembourg: Publications Office of the European Union, 2010. ISBN 978-92-79-14328-1

2007 **Invited Presentation**, *statGIS2007 Conference*, University of Klagenfurt, Austria.
Title: "On the Importance of Being Spartan"

2006 **Invited Presentation**, *Title: "Spartan Random Fields Modelling", statGIS2006 International Summer School*, University of Klagenfurt, Austria.

2005 **Invited Presentation**, *Title: "Applications of the Renormalization Group in Upscaling Hydrological Parameters", European Geophysical Union 2003 General Assembly*, Vienna, Austria.

2003 **Johannes A. Van den Akker International Prize for Advances in Paper Physics**, *Technical Association of the Pulp and Paper Industry (TAPPI) Paper Physics Committee*.

1985 **Stanley Seeger Graduate Studies Fellowship**, *Princeton University*, USA.

Recognition of Students' Research

2018 **Vasilios Androulakis**, *Undergraduate Studies Excellence Award*, Greek Mining Enterprises Association, (Diploma thesis supervisee).
Thesis Title: Implementation of geostatistical algorithms and applications in geological media simulation

2016 **Emmanouil Petrakis**, *Mathematical Geosciences Student Award*, International Association of Mathematical Geosciences, (PhD advisee).
Title: "Non-stationary covariance functions based on local interactions"

2015 **Emmanouil Varouchakis**, *Natural Resources Research Award*, International Association of Mathematical Geosciences, (Former PhD advisee).
Title: "A Bayesian space-time geostatistical model for groundwater level variability estimation"

Recent Funded Research Projects

2020-2021 **Gaussian anamorphosis using kernel estimation for spatially distributed data and time series and application to precipitation**, *Supporting Research with Emphasis on Early-Career Investigators, Phase B*, Operational Programme for Education and Lifelong Learning, Ministry of Development and Investments, Greece, Budget: 41,541.50 €. Role: Coordinator.

10/2017-9/2019 **ENviSION-EO: Enhancing our Understanding of Earth's Land Surface Interactions at Multiple Scales Utilising Earth Observation**, *Marie Curie Individual Fellowships (MSCA-IF-2016) (fellow: G. Petropoulos)*, Horizon 2020, European Commission, Grant Agreement number: 752094 — ENviSION-EO — H2020-MSCA-IF-2016, Budget: 164,653.20€. Success rate of MC-IF projects is 13%-14% (2015 ad 2016). Role: Supervisor.

6/2016 - 5/2018 **DESIRES: DESign of DESalination systems based on optimal usage of multiple Renewable Energy Sources**, *ERANETMED NEXUS-14-049*, co-financed by the European Commission's 7th Framework Programme, Number: T3EPA-00017, Budget: 335,458€. Role: Principal Investigator.
Project site: Desires

7/2012 - 6/2015 **SPARTA: Development of Space-Time Random Fields based on Local Interaction Models and Applications in the Processing of Spatiotemporal Datasets**, *Excellence Research Grant 2011, Number 1591*, co-financed by the European Social Fund and National Resources, Operational Programme for Education and Lifelong Learning, Greece, Budget: 250,000€. Role: Coordinator.
Project site: SPARTA

4/2012-3/2015 **NAMCO: Development of High Performance Alumina Matrix Nanostructured Composites**, *Thalis Research Grant: Operational Programme for Education and Lifelong Learning*, Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Budget/Total Budget: 90,000€/600,000€, co-financed by the European Union. Role: Principal Investigator.
Project site: NAMCO

1/2012-12/2012 **Is the Spili Fault, Crete, Responsible for the Double Destruction of the Minoan Palace at Phaistos?**, *Scientific Projects 2012-Physical Sciences*, John S. Latsis Public Benefit Foundation, Budget: 12,000€. Role: Researcher in Charge.

11/2010-11/2012 **FIBREBREAK: Development of Fibre Bundle Breakdown Model for the Simulation of Point Patterns and the Simulation of Interevent Times between Fibre Breaks**, *Basic Research Fund*, Technical University of Crete, Budget: 15,000€. One proposal per Department is funded annually. Role: Principal Investigator.

3/2009-3/2011 **BRIDGSEISMTIME: Bridging the timescales in fault-slip accumulation: from the earthquake record to the geological record**, *Marie Curie International Incoming Fellowship (MC IIF) (fellow: V. Mouslopoulou)*, FP7, European Commission, Contract: PIIF-GA-2009-235931, Budget: 202,163€. Success rate of MC IIF projects is 23%-24%. Role: Coordinator.
Project site: BridgSeismTime

9/2006-8/2009 **INTAMAP: Interoperability and Mapping**, *Research Project (STREP), (IST Call 5: IST-2005-2.5.12, ICT for Environmental Risk Management)*, FP6, European Commission, Contract no.: 033811, TUC Budget/Total Budget: 174,960€/1,856,000€. Success rate of FP6 IST STREP calls was 11.7%. Role: Principal Investigator & Work Package Leader.

9/2005-8/2008 **SPATSTAT: Development of Spartan Spatial Random Field Models for Geostatistical Applications**, *Marie Curie Transfer of Knowledge (MC TOK)*, FP6, European Commission, Contract: MTKD-CT-2004-014135, Budget: 304,806€. Success rate of MC TOK projects was 23%-24%. Role: Coordinator.
Project site: www.mred.tuc.gr/projects/spatstat/

9/2004-8/2007 **ACTIVATION: Super high Energy Milling in the Production of Hard Alloys, Ceramic and Composite Materials**, *Research Project (STREP), (NMP2, Nanotechnology and nanosciences, knowledge-based multifunctional materials and new production processes and devices)*, FP6, European Commission, Contract no.: FP6-505885-1, TUC Budget/Total Budget: 334,800€/1,999,999 €. (I coordinated this project after the departure of the initial coordinator —Prof.Tsetsekou— for another University). Success rate of FP6 NMP STREP calls was 16%. Role: Principal Investigator & Coordinator replacement.
Project site: www.mred.tuc.gr/projects/activation/index.htm

2005-2006 **Development of Novel Geostatistical Methods in Environmental Pollutant Mapping and Environmental Risk Assessment**, *PYTHAGORAS II: Operational Programme for Education and Initial Vocational Training*, Ministry of Education, Lifelong Learning and Religious Affairs, Greece, Budget: 50,000€, co-financed by the Third Community Support Framework and the European Social Fund. Role: Coordinator.

Teaching Experience

Graduate Courses: Program in *Geotechnology and the Environment*

2002 - Present **Department of Mineral Resources Engineering**, *Technical University of Crete.*

- *Data Analysis* (harmonic analysis, random fields, variogram estimation, optimal interpolation) (2002–2013)
- *Introduction to Geostatistical Simulations* (model inference, kernel methods, Monte Carlo methods, Ising model, conditional simulations)
- *Time Series Analysis* (2014–Present)
- *Introduction to Spartan Spatial Random Fields and their Applications* (2016–Present)
- Coordinated graduate research seminars (2004–2009)

Graduate Courses: Program in *Petroleum Engineering*

2014–2016 **Department of Mineral Resources Engineering**, *Technical University of Crete.*

- *Data Analysis and Modeling* (Probability and Statistics, Time Series, Fourier analysis, Geostatistics) (2014–2016)

Undergraduate Courses

2002– Present **Department of Mineral Resources Engineering**, *Technical University of Crete.*

- *Electrical Circuits* (2002–2006)
- *Engineering Probability and Statistics* (2002–Present)
- *Applied Geostatistics* (Introduction to spatial analysis) (2002–Present)
- *Physics I* (Mechanics, Thermodynamics) (2015)

Teaching Assistantships

1986–1990 **Physics Department**, *Princeton University*, NJ, USA.

- Laboratory teaching assistant for sophomore mechanics and electromagnetism classes for engineers (2 years)
- Laboratory teaching assistant for Introductory physics for non-science majors (2 years)

International Workshops and Short Courses

IHE 2019: *Geostatistics for Water Management and Environmental Sciences*

23–27/9/2019 **Research School for Socio-Economic and Natural Sciences of the Environment**, *UNESCO-IHE Institute for Water Education*, Delft, Netherlands.

- *Spatiotemporal variography/Space-time geostatistics* (September 24, 2019)
- *Spatiotemporal geostatistical analysis (prediction/interpolation)* (September 24, 2019)
- *Conditional and unconditional Simulation techniques in geostatistics* (September 26, 2019)
- *Uncertainty estimation in geostatistics/error propagation/practical* (September 26, 2019)
- *Project development & evaluation* (September 27, 2019)

GEOSTAT2018: *Spatial analysis and applications in geological, mining and environmental problems*

22–25/1/2018 **Center for Scientific and Technical Information**, *Wroclaw University of Science and Technology*, Wroclaw, Poland.

- *Spartan random fields, anisotropy* (January 22, 2018)
- *Stochastic local interaction models, applications to data* (January 22, 2018)

Academic Advising

2002– Present **Department of Mineral Resources Engineering**, *Technical University of Crete.*

I have supervised the research of eight post-doctoral researchers, and I have advised over 60 (both undergraduate and graduate) students, mostly in the Departments of Mineral Resources and Environmental Engineering, on their thesis research. The partial list below focuses on theses for which I was the primary advisor.

Post-doctoral Research Advisees

- Samuel Elogne, Ph.D. Applied Mathematics, University of Toulouse I & III, France.
- Milan Žukovič, Ph.D. Engineering (Solid State Physics), Kyushu University, Japan. *Currently: Associate Professor, Department of Theoretical Physics and Astrophysics, Pavol Jozef Šafáric University, Košice, Slovak Republic.*
- Arsenia Chorti, Ph.D. Communications & Signal Processing, Imperial College, United Kingdom. *Currently: Associate Professor at the ENSEA, University of Cergy-Pontoise, France.*
- Aris Moustakas, Ph.D. Ecology, Friedrich-Schiller-University University, Jena, Germany. *Currently: Data Analytics Consultant.*
- Aliki Muradova, Ph.D. Mathematics, Tsiblisi State University, Republic of Georgia. *Currently: Associate Research Scientist at Technical University of Crete.*
- Vasiliki Mouslopoulou, Ph.D. Geology, Victoria University of Wellington, New Zealand. *Currently: Associate Researcher, Institute of Geodynamics, National Observatory of Athens, Greece.*
- Ivi Tsantili, Ph.D. Naval Architecture and Marine Engineering, National Technical University of Athens, Greece. *Currently: Post-doctoral Researcher at Beijing Computational Science Research Center, China.*
- Andreas Pavlidis, Ph.D. Mineral Resources Engineering, Technical University of Crete, Greece. *Currently: Post-doctoral Research Associate at Technical University of Crete.*

PhD Student Research Advising (Primary Advisor)

- Emmanouil Varouchakis. PhD granted, October 2012: Dissertation title: "Geostatistical Analysis and Space-Time Models of Aquifer Levels: Application to Mires Hydrological Basin in the Prefecture of Crete". *Currently: Specialized/Laboratory Teaching Personnel, Technical University of Crete, and Visiting Researcher/Guest Lecturer, UNESCO IHE, Institute for water education, Chair Group of Hydroinformatics, Department of Integrated Water Systems and Governance Delft, Netherlands.*
- Andreas Pavlidis. PhD successfully defended, June 2016: Dissertation title: "Development of Novel Geostatistical Methods of Spatial Interpolation and Application to the Estimation of Reserves and Quality Properties of Lignite". *Currently: Post-doctoral Researcher, Technical University of Crete.*
- Emmanouil Petrakis. PhD research in progress: Dissertation title: "Development of Geostatistical Models based on Random Fields with Local Interactions".
- Vasiliki Agou. PhD research in progress: Dissertation topic: "Geostatistical Analysis of Precipitation."

M.Sc. Student Thesis Advising (Graduate Program in *Geotechnology and the Environment*)

- Andreas Pavlidis. M.Sc. granted, November 2008: Thesis title: Comparison of Lignite Reserves Estimation Methods for the Amyndeo Mine and Development of Profitability Index"
- Emmanouil Varouchakis. M.Sc. granted, November 2008: Thesis title: "Application of Spartan Spatial Random Fields in the Geostatistical Analysis of the Spatial Distribution of Environmental Pollutants"
- Ioannis Spiliopoulos. M.Sc. granted, November 2010: Thesis title: "Development of Geometric Anisotropy Estimation Methods using Data from Sensor Networks"

- Emmanouil Petrakis. M.Sc. granted, December 2012. Thesis title: "Elliptical Anisotropy Statistics of Spatial Data and Geostatistical Applications"
- Vasiliki Agou. M.Sc. granted, January 2016. Thesis title: "Geostatistical Analysis of Non-Gaussian Spatial Data. Application to Rainfall Field in Crete"
- Ioannis Rogdakis. (M.Sc. thesis defended in February 2017. Thesis title: "Stochastic Forecasting of Midterm Electricity Load with Geostatistical Methods")
- Panagiota Gkafa. (M.Sc. thesis in progress. Thesis title: "Geostatistical Analysis of Wind Energy Production Data")

M.Sc. Student Thesis Advising (Program in *Petroleum Engineering*)

- Konstantinos Georgousakis. M.Sc. thesis defended in January 2017. Thesis title: "Geostatistical analysis of permeability data"

Undergraduate Student Theses/Research

- Panagiota Gkafa. Graduation year 2017. Thesis title (in Greek): "Geostatistical analysis of coal reserves based on data from Campbell county, USA.
- Vasilis Androulakis. Graduation year 2017. Thesis title: "Implementation of algorithms and geostatistical methods for the simulation of geological media properties."
- Panagiotis Matenidis. Graduation year 2017. Thesis title (in Greek): "Geostatistical analysis of lignite data from the Kardia mine of the lignite Western Macedonia centre."
- Asterios Pagonis. Graduation year 2018. Thesis title (in Greek): "Geostatistical analysis of toxic heavy metal concentrations in the soil."
- Anastasia Xenaki. Defense date: December 9, 2019. Thesis title: "Analysis of Well Log Data using Time Series Models and Geostatistical Methods."
- Michaela Vasiliadi. Expected defense: January 2020. Thesis title: "Statistical Analysis of Seismic Sequences from Zakynthos Island, Greece."
- Research advisor to four undergraduate students from the Department of Electronics and Computer Engineering (Spiros Blanas, Melina Demertzi, Ioannis Spiliopoulos, Ioannis Kardaras) on topics related to the European-Commission-funded projects Activation and Intamap.

Extramural PhD Student Advising

- November 2008: Member of the PhD examination committee of Dominique Fasbender, *Earth and Life Institute/Environmental Sciences, Université Catholique de Louvain, Belgium*. Dissertation title: "Data fusion in Environmental Sciences: Theory and Applications'. Primary Advisor: Prof. Patrick Bogaert.
- November 2013: Member of the PhD examination committee of Sevasti Ivi Tsantili, *School of Naval Architecture and Marine Engineering, National Technical University of Athens*. Dissertation title: "Two-Time Response Excitation Theory For Non Linear Stochastic Dynamical Systems". Primary Advisor: Prof. Gerassimos A. Athanassoulis.
- 2015: Reviewer for the PhD dissertation of Maria Tirronen, *Department of Mathematical Information Technology, University of Jyväskylä, Finland*. Dissertation title: "On Stochastic Modelling and Reliability of Systems with Moving Cracked Material". Primary Advisor: Prof. Pekka Neittaanmäki.

- 2012 - 2018: External committee member for the PhD dissertation of Sarah Gengler, *Earth and Life Institute/Environmental Sciences, Université Catholique de Louvain, Belgium*. Dissertation title: "Spatial Prediction of Categorical Variables in Environmental Sciences: A Minimum Divergence and Bayesian Data Fusion Approach". Primary Advisor: Prof. Patrick Bogaert.

Recent PhD Steering Committees at Technical University of Crete

- April 2012: Member of the PhD examination committee of Ioannis Dimou, *Department of Electronic Engineering, Technical University of Crete*. Thesis title: "Design and Implementation of Support Vector Machines and Information Fusion Methods for Bio-medical Decision Support Systems". Primary Advisor: Prof. Michael Zervakis.
- 2013 - 2018: Steering committee member for the PhD dissertation of Maria Stratigaki, *School of Mineral Resources Engineering, Technical University of Crete*. Thesis title: "Microstructure and Mechanical Properties of Metal/Alumina-matrix Composites". Primary Advisor: Prof. Alexandros Gotsis.
- 2016 - Present: Steering committee member for the PhD dissertation of Panagiota Theodoridou, *School of Environmental Engineering, Technical University of Crete*. Thesis title: "Development of Geostatistical Space-Time Models for Hydrological Applications". Primary Advisor: Prof. George Karatzas.
- 2016 - Present: Steering committee member for the PhD dissertation of Sofia Nerantzaki, *School of Environmental Engineering, Technical University of Crete*. Thesis title: "Impacts of Climate Change on the Hydrology and Geochemistry of Crete and Assessment of Prediction Uncertainty". Primary Advisor: Prof. Nikolaos Nikolaidis.

Conference Organization & Session Chairing

EGU 2020 **European Geophysical Union General Assembly 2020**, *Vienna*, Austria; April 2017, Co-organizer of HS3.7/ESSI1/GI6/NH1/SSS10 Session: Advanced Geostatistics for Water, Earth and Environmental Sciences.

EGU 2019 **European Geophysical Union General Assembly 2019**, *Vienna*, Austria; April 2019, Co-organizer of HS3.2 Session: Spatio-temporal and/or (geo)statistical analysis of hydrological events, floods, extremes, and related hazards.

Spatial Statistics 2019 **Towards Spatial Data Science**, *Sitges*, Spain: July 10-13 2019, Scientific Committee member: Conference web site.

IAMG 2018 **The 19th Annual Conference of the International Association for Mathematical Geosciences**, *Olomouc*, Czech Republic: September 2018, Topical Session convener: Dimensionality Reduction and Local Methods for Big Spatial and Space-time Data.

Spatial Accuracy 2018 **Spatial Accuracy Assessment in Natural Resources and Environmental Sciences**, *Beijing*, China; May 2018, Member of the Scientific Committee.

Spatial Statistics 2017 **One World: One Health**, *Lancaster*, United Kingdom: July 2017, Chair of Session: Session A6 Space-time.

SigmaPhi 2017 **International Conference on Statistical Physics**, *Corfu*, Greece; July 2017, Member of the Organizing and Program Committees and Co-organizer of Workshop on Statistical Physics, Environment and Climate.
(co-organized with P. Ditlevsen and D. Valenti)

EGU 2017 **European Geophysical Union General Assembly 2017**, *Vienna*, Austria; April 2017, Co-organizer of HS3.2/NH1.19 Session: Spatio-temporal and/or geostatistical analysis of hydrological events, extremes, and related hazards.

UNCECOMP 2017 **2nd International Conference on Uncertainty Quantification in Computational Sciences and Engineering**, *Rhodes, Crete*, Greece: June 2017, Session convener: MS 10: Current Topics in Uncertainty Characterization.

EGU 2016 **European Geophysical Union General Assembly 2015**, *Vienna*, Austria; April 2016, Co-organizer of HS3.2 Session: Spatio-temporal and/or geostatistical analysis of hydrological events, extremes, and related hazards.

ECCOMAS 2016 **7th European Congress on Computational Methods in Applied Sciences and Engineering**, *Hersonisos, Crete*, Greece: June 2016, Session convener: MS 1305: Stochastic Models of Failure in Random Heterogeneous Materials and Complex Networks.

IAMG 2015 **The 17th annual conference of the International Association for Mathematical Geosciences**, *Freiberg*, Germany: September 2015, Session convener: Integration of stochastic and numerical models.

Spatial Statistics 2015 **Spatial Statistics: Emerging Patterns**, *Avignon*, France: June 2015, Chair of Session: New Spatial Data Sources.

EGU 2015 **European Geophysical Union General Assembly 2015**, *Vienna*, Austria; April 2015, Co-organizer of HS3.2 Session: Geostatistics for space-time analysis of hydrological events and environmental problems.

SigmaPhi 2014 **International Conference on Statistical Physics**, *Rhodes*, Greece; July 2014, Member of the Organizing Committee and Organizer of Workshop on Environmental Statistical Physics.

Interpore 2012 **The Fourth International Conference on Porous Media and Annual Meeting of the International Society for Porous Media**, *Purdue University* , Indiana, USA; May 2012, Member of the International Scientific Committee and Organizer of session Nonlinear and Complex Processes in Porous Media.

SigmaPhi 2011 **International Conference on Statistical Physics**, *Larnaca*, Cyprus; July 2011, Member of the Organizing and Scientific Committees.
http://www.sigmaphi.polito.it/2011/

EMS2010 **28th European Meeting of Statisticians**, *University of Piraeus*, Greece; August, 2010, Session Chair (Environmental and Spatial Statistics).

StatGIS2009 **Geoinformatics for Environmental Surveillance International Conference**, *Milos Island*, Greece; June 2009, Member of the Organizing and Scientific Committees.
https://wiki.52north.org/AI_GEOSTATS/ConfStatGIS2009

SigmaPhi 2008 **International Conference on Statistical Physics**, *Orthodox Academy of Crete, Chania*, Greece; August 2008, Member of the Organizing and Scientific Committees.
http://www.sigmaphi.polito.it/2008/

StatGIS 2007 **Geoinformatics for Environmental Surveillance International Conference**, *University of Klagenfurt*, Austria; September 2007, Member of the Scientific Committee and Co-chair of Theory and Methodology Session.

ICCMSE 2004 **International Conference on Computational Methods in Sciences and Engineering**, *Athens*, Greece; November 2004, Session Chair (Stochastic Methods and Applications).

Selected Committee and Service Work

2016 **July 2016: Representative of TUC on the National Cooperation Committee of the Academic Institutes of Crete (appointed by the Rector)**, *Technical University of Crete (TUC)*, Chania, Greece.

2012–2017 **December 2012–August 2017: Member of the elected 14-member University Council (Board of Trustees)**, *Technical University of Crete*, Chania, Greece.

2011–Present **Institution Operational Contact for AXA Research Fund**, Technical University of Crete, Chania, Greece.

2011–2013 **Chair (October 2012–2013) and Member (June 2011–September 2012) of the Undergraduate Curriculum Committee**, *Department of Mineral Resources Engineering*, Technical University of Crete, Chania, Greece.

2004–2009 **Director of Graduate Studies: Program "*Geotechnology and Environment*"**, *Department of Mineral Resources Engineering*, Technical University of Crete, Chania, Greece.

2009 **Committee for the Development Planning of Technical University of Crete**, *Department of Mineral Resources Engineering*, Technical University of Crete, Chania, Greece.

2003-2006 **Supervising Committee of the Computer Labs**, Technical University of Crete, Chania, Greece.

1996-1998 **Academic Advisor**, Hellenic Students Association, University of North Carolina, Chapel Hill, USA.

Outreach

2019 **Research highlighted in *Research Outreach* magazine**, *When kinetic theories clash, mind the lattice step: A statistical physics approach to the motion of atoms within materials*, G. Kaniadakis and D. T. Hristopulos.

2014 **Science & Technology Day**, *Geostatistics laboratory participated with presentation in one-day event for elementary school children*, Technical University of Crete, Chania, Greece, October 18, 2014.

2013 **Science & Technology Day**, *Geostatistics laboratory participated with presentation in one-day event for elementary school children*, Technical University of Crete, Chania, Greece, December 7, 2013.

2010 **Interviewed on the program ECO News**, *Focus on the European project* INTAMAP *for radioactivity monitoring*, SKAI Television, October 25, 2010.

Membership in Professional Societies

- American Physical Society, Member since 1986
- International Association of Mathematical Geosciences, Life Member since 2014
- Technical Chamber of Greece, Member since 1985
- I have been a Member of the Society of Industrial and Applied Mathematics, the Institute of Electrical and Electronic Engineers, the European Geophysical Union, the European Association of Geoscientists, Interpore, the American Geophysical Union, and the Technical Association of the Pulp and Paper Industry

Journal Paper Refereeing

- *Advances in Water Resources*, published by Elsevier
- *Computers & Geosciences*, published by Elsevier
- *Environmental Modeling and Software*, published by Elsevier
- *Environmental Science and Technology*, published by the American Chemical Society
- *Journal of the American Ceramic Society*
- *Journal of the European Ceramic Society*, published by Elsevier
- *Journal of Geophysics and Engineering*, published by the Institute of Physics
- *Journal of Hydrology*, published by Elsevier
- *Journal of Pulp and Paper Science*, published by the Technical Association of Pulp and Paper Industry
- *Journal of Physics A: Mathematical and Theoretical*, published by the Institute of Physics
- *Mathematical Geosciences*, published by Springer
- *Physica A*, published by Elsevier
- *Probabilistic Engineering Mechanics*, published by Elsevier
- *Quarterly Journal of the Royal Meteorological Society*

- *Signal Processing Letters*, published by the Institute of Electrical and Electronic Engineers
- *Simulation Modelling Practice and Theory*, published by Elsevier
- *Spatial Statistics*, published by Elsevier
- *Stochastic Environmental Research and Risk Assessment*, published by Springer
- *Transactions on Remote Sensing and Geosciences*, published by the Institute of Electrical and Electronic Engineers
- *Transactions on Information Theory*, published by the Institute of Electrical and Electronic Engineers
- *Transactions on Wireless Communications*, published by the Institute of Electrical and Electronic Engineers
- *Water Resources Research*, published by the American Geophysical Union

External Reviewing of Research Grant Proposals

- European Commission, *Executive Agency for Small and Medium-sized Enterprises (EASME)* proposals for the call H2020-EIC-FTI-2018-2020, 2018, 2019
- Foundation for Polish Science, Poland, 2016
- Qatar National Research Fund, Qatar, 2015
- National Centre for Research and Development, Ministry of Science and Higher Education, Poland, 2013
- Romanian National Council for Scientific Research, Romania, 2012
- National Center of Science and Technology Evaluation, Ministry of Education and Science, Republic of Kazakhstan, 2011, 2012, 2013
- European Commission (STCU), 2005
- Israel Science Foundation, 2004, 2007
- US Civilian Research and Development Foundation, 1998

Seminars Presented at Academic Departments, Research Institutes and Companies

1. "Local Interaction Energy Functionals and Applications in Space-Time Data Analysis", Department of Economic Sciences, University of Salento, Lecce, Italy, November 2019.
2. "Models for Space-Time Data Inspired from Statistical Physics", Department of Statistics, Purdue University, West Lafayette, Indiana, USA, October 2019.
3. "Models for Space-Time Data Inspired from Statistical Physics", Department of Statistics, University of Kentucky, Lexington, Kentucky, USA, October 2019.
4. "New Frontiers in Geostatistics", Department of Geography, Harokopio University, Athens, Greece, May 2017.
5. "New Frontiers in Geostatistics", Department of Mining Engineering, University of Kentucky, Lexington, Kentucky, USA, March 2017.
6. "Modeling Earthquake Recurrence Times using Physical Insights and Statistical Analysis", Department of Statistics, Athens University of Economics and Business, Athens, Greece, December 2016.
7. "A Scientific Career as a Biased Random Walk: a Personal Perspective," English Talk Series, Language Center, Technical University of Crete, Chania, Greece, November 2016.

8. "Local-Interaction Energy Functionals and Applications in Space-Time Data Analysis", Department of Mathematics and Statistics, University of Cyprus, Nicosia, Cyprus, November 2015.
9. "Stochastic Local Interaction Models for Spatiotemporal Data", Department of Informatics and Telecommunications, National and Kapodistrian University of Athens, Greece, May 2014.
10. "Random Fields based on Local Interaction Models for Spatiotemporal Data," Department of Civil and Environmental Engineering, Princeton University, Princeton, NJ, USA, December 2013.
11. "Stochastic Local Interaction Models for Spatiotemporal Data," Academia Sinica, Taipei, Taiwan, October 2013.
12. "Connections between Fracture Mechanics and Earthquake Interevent Times", National Central University, Jhongli, Taiwan, October 2013.
13. "Stochastic Local Interaction Models for Spatiotemporal Data," Pacific Northwest National Laboratory Computational Sciences & Mathematics Division, Washington State, USA, July 2013.
14. "Statistical Physics, Fracture Mechanics, Geostatistics and Earthquakes," Statistics Department, University of Valparaiso, Chile, May 2013.
15. "Gaussian Field Theory as a Tool for Spatial Data Processing", Physics Department, University of Crete, Herakleion, Greece, March 2013.
16. "Statistical Models of Spatial Processes Based on Local-Interaction Energy Functionals", Uncertainty Quantification Workshop, Institute for Computational and Experimental Research in Mathematics, Brown University, Providence, RI, USA, October 2012.
17. "Spatial Random Fields based on Local Interactions and Applications to Spatial Interpolation", Department of Applied Mathematics, Brown University, USA, May 2012.
18. "Statistical Mechanics of Brittle Fracture: From Paper Webs to Earthquakes," Physics Department, University of Crete, Herakleion, Greece, April 2012.
19. "Spartan Gibbs Random Fields." CRENoS - DEIR Seminar, Economics Faculty, University of Sassari, Italy, September 2011.
20. "An Introduction to the Analysis of Spatial Data using Spartan Spatial Random Fields." School of Rural and Surveying Engineering, Aristotle University of Thessaloniki, Greece, May 2011.
21. "An Introduction to the Analysis of Spatial Data using Spartan Spatial Random Fields." Department of Statistics, North Carolina State University, Raleigh, North Carolina, USA, July 2010.
22. "Estimation of Geometric Anisotropy from Scattered Spatial Data with Emphasis on Automatic Mapping." Center of Applied Environmental Fluid Mechanics, Johns Hopkins University, Baltimore, Maryland, USA, July 2010.
23. "Spartan Random Fields and Applications in the Analysis of Spatial Data with Irregular Sampling." Department of Applied Mathematics, École Centrale de Paris, France, November 2009.
24. "Stochastic Methods of Spatial Analysis for Scattered Data with Environmental Applications." Department of Electronic and Computer Engineering, Technical University of Crete, Greece, April 2008.
25. "Spartan Spatial Random Fields: Reinventing Geostatistics for Environmental Systems Applications." Department of Geography and Environmental Engineering, Johns Hopkins University, Baltimore, Maryland, USA, January 2008.
26. "Development of Spartan Spatial Random Fields for Geostatistical Applications." Department of Geography and Environmental Engineering, Johns Hopkins University, Baltimore, Maryland, USA, January 2005.
27. "Spartan Geostatistical Models." Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, North Carolina, USA, August 2003.

28. "Modern Trends in Geostatistics and Applications in the Geophysical Sciences." Department of Mineral Resources Engineering, Technical University of Crete, Chania, Greece, August 2001.
29. "Geostatistical Models of Anisotropic Dependence." Department of Mineral Resources Engineering, Technical University of Crete: Chania, Greece, June 2001.
30. "Dancing Strings and Tension Variations." Pulp and Paper Research Institute of Canada: Pointe-Claire, Quebec, Canada, May 2001.
31. "Upscaling of Spatial Heterogeneity in Porous Media Using Random Field Models." Center of Nonlinear and Complex Systems, Duke University, Durham, North Carolina, USA, March 2000.
32. "Random Fields in the Analysis of Groundwater Flow and Contaminant Transport." Department of Physics, University of Crete, Herakleion, Greece, June 1999.
33. "Coarse-graining Analysis of Fluctuations in Porous Media." Pulp and Paper Research Institute of Canada, Pointe Claire, Quebec, Canada, May 1999.
34. "Renormalization Analysis of Flow and Transport in Heterogeneous Media." Center for Nuclear Waste Regulatory Analyses, Southwest Research Institute, San Antonio, Texas, USA, January 1999.
35. "New Upscaling Methods For Heterogeneous Media: Beyond Low-Order Perturbation Expansions." Department of Geological Sciences, University of South Carolina, Columbia, South Carolina, USA, October 1998.
36. "Calculation of Effective Parameters in Random Models of Porous Media by means of Statistical Field Theories." Physical Chemistry Institute, National Center for Scientific Research Democritus, Athens, Greece, June 1998.
37. "Stochastic Models: Estimation, Simulation and Scale Change." Integrated Decisions and Systems, Inc., Eagan, Minnesota, USA, June 1998.
38. "Applications of Random Field Models in Subsurface Hydrology." Department of Civil and Environmental Engineering, University of Cincinnati, Cincinnati, Ohio, USA, October 1998.
39. "Variational Calculation of Effective Parameters in Stochastic Porous Media Using Replicas." Applied Mathematics Seminar, Department of Mathematics, University of North Carolina, Chapel Hill, North Carolina, USA 1997.
40. "Stochastic Models of Porous Media and the Scale-Up Problem." Physical Chemistry Institute, National Center for Scientific Research Democritus, Athens, Greece, July 1997.
41. "Heterogeneous Media and Level Statistics Analysis using Phase/Indicator Functions." Higher Dimension Research, Inc., Saint Paul, Minnesota, USA, June 1997.
42. "Modeling Random Heterogeneous Media at Various Physical Scales." Higher Dimension Research, Inc., Saint Paul, Minnesota, USA, June 1997.
43. "Advances in Groundwater Modeling." UNC Superfund Center Annual Workshop, University of North Carolina, Chapel Hill, North Carolina, USA 1996.
44. "Flow in Stochastic Porous Media: A Multiple-Scale Sea." Water Resources Engineering Seminar series, Department of Environmental Sciences and Engineering, University of North Carolina, Chapel Hill, North Carolina, USA 1995.
45. "Stochastic Analysis of Flow and Transport Phenomena." UNC Superfund Center Annual Workshop, University of North Carolina, Chapel Hill, North Carolina, USA 1995.
46. "Non-local Generalization of Darcy's Law and Diagrammatic Theory." Department of Petroleum Engineering, Stanford University, Palo Alto, California, USA, March 1994.

Web Presence

TUC **Geostatistics Laboratory**, *School of Mineral Resources Engineering*, Technical University of Crete.

TSI **Telecommunication Systems Institute**, *Technical University of Crete*.

LinkedIn **LinkedIn**.

Google **Google Scholar**.

RG **ResearchGate**.